Appl. No. 10/775,886
Amendment dated May 26, 2006
Reply to Office Action of February 23, 2006

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Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1-27. (Canceled)

28. (New) A file migration method between a first system and a second system,

wherein the first system includes a first file access controller and a first storage system, the first storage system includes a plurality of first magnetic disk devices and a first storage controller coupled to the plurality of first magnetic disk devices, and the first file access controller manages a first file system configured in the first system, receives a file access request, and controls to access a file according to the file access request, and

wherein the second system includes a second file access controller and a second storage system, the second storage system includes a plurality of second magnetic disk devices and a second storage controller coupled to the plurality of second magnetic disk devices, and the second file access controller manages a second file system configured in the second system, receives a file access request, and controls to access a file according to the file access request,

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wherein a plurality of policies including conditions of file migration are

prepared by a plurality of software programs,

the file migration method comprising steps of:

(a) finding a file, which satisfies a condition of one of the plurality of policies, in

the first file system;

(b) migrating the file, which satisfies the condition of the one of the plurality of

policies, from the first system to the second system; and

(c) leaving information indicating a migration destination of the migrated file

and information relating to one of the plurality of software programs, by which the

one of the plurality of policies applied to the migrated file is prepared, in the first

system.

29. (New) A file migration method according to claim 28,

wherein the information relating to the one of the plurality of software

programs, which is left in the first system, is information indicating the one of the

plurality of software programs, by which the one of the plurality of policies applied to

the migrated file is prepared.

30. (New) A file migration method according to claim 29,

wherein the information indicating the migration destination of the migrated file

and the information indicating the one of the plurality of software programs, by which

the one of the plurality of policies applied to the migrated file is prepared, are left in

the first storage system.

31. (New) A file migration method according to claim 30,

wherein in the plurality of first magnetic disk devices, a first logical unit is

configured, and in the plurality of second magnetic disk devices, a second logical unit

is configured,

wherein in the step of migrating, data of the file is migrated from the first

logical unit to the second logical unit, and

wherein in the step of leaving, the information indicating the migration

destination of the migrated file and the information indicating one of the plurality of

software programs, by which the one of the plurality of policies applied to the

migrated file is prepared, are left in the first logical unit, from which the data of the file

is migrated to the second logical unit.

32. (New) A file migration method according to claim 28,

wherein in the second system, another file name, which is different from an

original file name of the migrated file used in the first system, is used to identify the

migrated file, and

wherein the another file name used in the second system is further left in the

first system.

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33. (New) A file migration method according to claim 32,

wherein the information indicating the migration destination of the migrated

file, the information relating to the one of the plurality of software programs, by which

the one of the plurality of policies applied to the migrated file is prepared, and the

another file name used in the second system are accessible by using the original file

name.

34. (New) A file migration method according to claim 33,

wherein after migrating the file, if the first file access controller receives a file

access request including the original file name, the first file access controller sends

the second file access controller another file access request including the another file

name used for the migrated file in the second system.

35. (New) A file migration method according to claim 28,

wherein information indicating a size of the migrated file, access permission to

the migrated file, and creation date of the migrated file are further left in the first

system.

36. (New) A file migration method according to claim 28,

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wherein the first file access controller and the second file access controller are

configured to provide an access to a file according to NFS or CIFS protocol.

37. (New) A file migration method according to claim 28,

wherein in the step of migrating, the file is read from the first file system, a

write request to store the file in the second file system is transmitted to the second

system, and the second file access controller writes the file according to the write

request.

38. (New) A file migration method according to claim 37, wherein the write request

transmitted to the second system is according to NFS or CIFS protocol.

39. (New) A method for migrating a file between a first system and a second

system,

wherein the first system includes a first file access controller, a first storage

controller, and a plurality of first magnetic disk devices, and the first file access

controller receives a file access request from a computer and controls to access a

file according to the received file access request, and

wherein the second system includes a second file access controller, a second

storage controller, and a plurality of second magnetic disk devices, and the second

file access controller receives a file access request and controls to access a file

according to the received file access request,

the method comprising steps of:

determining policies, which are used for migrating a file, by a plurality of

software programs;

migrating a file from the first system to the second system by applying one of

the policies; and

leaving information indicating a migration destination of the migrated file and

information indicating which one of the plurality of software programs determines the

one of the policies applied to the migrated file, in the first system.

40. (New) A method for migrating a file according to claim 39,

wherein in the plurality of first magnetic disk devices, a first logical unit is

configured,

wherein in the step of migrating, data of the file is migrated from the first

logical unit to the second system, and

wherein in the step of leaving, the information indicating the migration

destination of the migrated file and the information indicating which one of the

plurality of software programs determines the one the policies applied to the

migrated file are left in the first logical unit, from which data of the file is migrated to

the second system.

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41. (New) A system for storing a file comprising:

a first system including a first file access controller and a first storage system, wherein the first storage system has a plurality of first magnetic disk devices and a first storage controller coupled to the plurality of first magnetic disk devices, and the first file access controller manages a first file system configured in the first system, receives a file access request, and controls to access a file according to the file access request, and

a second system including a second file access controller and a second storage system, wherein the second storage system has a plurality of second magnetic disk devices and a second storage controller coupled to the plurality of second magnetic disk devices, and the second file access controller manages a second file system configured in the second system, receives a file access request, and controls to access a file according to the file access request,

wherein when a file stored in the first system satisfies a condition of one of a plurality of policies, which are prepared by a plurality of software programs, the file is migrated from the first system to the second system, and

wherein information indicating a migration destination of the migrated file and information relating to one of the plurality of software programs, by which the one of the plurality of policies applied to the migrated file is prepared, remain stored in the first system.

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42. A system for storing a file according to claim 41,

wherein the information relating to the one of the plurality of software

programs, which remains stored in the first storage system, is information indicating

the one of the plurality of software programs, by which the one of the plurality of

policies applied to the migrated file is prepared.

43. (New) A system for storing a file according to claim 42,

wherein the first storage system stores the information indicating the migration

destination of the migrated file and the information indicating the one of the plurality

of software programs, by which the one of the plurality of policies applied to the

migrated file is prepared, in the plurality of first magnetic disk devices.

44. (New) A system for storing a file according to claim 43,

wherein under the control of the first storage controller, a first logical unit is

configured in the plurality of first magnetic disk devices,

wherein under the control of the second storage controller, a second logical

unit is configured in the plurality of second magnetic disk devices,

wherein data of the file is migrated from the first logical unit to the second

logical unit, and

wherein the first storage system stores the information indicating the migration

destination of the migrated file and the information indicating the one of the plurality

of software programs, by which the one of the plurality of policies applied to the

migrated file is prepared, in the first logical unit, from which the data of the file is

migrated to the second logical unit.

45. (New) A system for storing a file according to claim 41,

wherein in the second system, another file name, which is different from an

original file name of the migrated file used in the first system, is used to identify the

migrated file, and

wherein the another file name remains stored in the first system.

46. (New) A system for storing a file according to claim 45,

wherein the information indicating the migration destination of the migrated

file, the information relating to the one of the plurality of software programs, by which

the one of the plurality of policies applied to the migrated file is prepared, and the

another file name are accessible by using the original file name.

47. (New) A system for storing a file according to claim 46,

wherein after a migration of the file, when the first file access controller

receives a file access request including the original file name of the migrated file, the

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first file access controller sends another file access request including the another file

name of the migrated file to the second system.

48. (New) A system for storing a file according to claim 41,

wherein information indicating a size of the migrated file, access permission to

the migrated file, and creation date of the migrated file further remain stored in the

first system.

49. (New) A system for storing a file according to claim 41,

wherein the first file access controller and the second file access controller are

configured to provide an access to a file according to NFS or CIFS protocol.

50. (New) A system for storing a file according to claim 41,

wherein when the file is migrated from the first system to the second system,

the first file access controller reads the file from the first file system, and transmits a

write request to the second system to store the file in the second file system, and the

second file access controller writes the file according to the received write request.

51. (New) A system for storing a file according to claim 50,

wherein the write request transmitted from the first file access controller to the

second system is according to NFS or CIFS protocol.

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52. (New) A system for storing a file comprising:

a first system includes a first file access controller, a first storage controller, and a plurality of first magnetic disk devices, wherein the first file access controller receives a file access request from a computer and controls to access a file according to the received file access request, and

a second system includes a second file access controller, a second storage controller, and a plurality of second magnetic disk devices, wherein the second file access controller receives a file access request and controls to access a file according to the received file access request,

wherein when a file satisfies a condition of one of a plurality of policies, which are determined by a plurality of software programs, the file is migrated from the first system to the second system by applying the one of the plurality of policies, and

wherein information indicating a migration destination of the migrated file and information indicating which one of the plurality of software programs determines the one of the plurality of policies applied to the migrated file are left in the first system.

53. (New) A system for storing a file according to claim 52,

wherein in the plurality of first magnetic disk devices, a first logical unit is configured, and the file is migrated from the first logical unit to the second system by applying the one of the plurality of policies, and

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wherein the information indicating the migration destination of the migrated file

and the information indicating which one of the plurality of software programs

determines the policy applied to the migrated file are left in a first logical unit, from

which data of the file is migrated to the second system.